

# SUBJECT INDEX

Vol. 105C, Nos 1-3

- $\alpha$  and  $\beta$ -adrenoceptors, 535
- A23187, 387, 463
- Abamectin, 69
- Acartia clausi*, 415
- Acetyl- $\beta$ -methylcholine, 127
- Acetylcholine, 127, 311, 535
- Acetylcholinesterase, 73, 323
- Acetylthiocholine, 127
- ACh, 513
- Achatin-I, 185
- Achatina fulica*, 185
- Acidification, 421
- Action potentials, 363
- Adenylate cyclase, 297, 531
- Adrenal medulla membranes, 435
- Adrenaline, 535
- $\alpha_1$ -Adrenoceptors, 479
- Aeromonas salmonicida*, 275
- ALA, 493
- Aluminum intoxication, 73
- Amino acid, 39
- Amitraz, 443
- Ammonia, 17
- cAMP, 77, 397, 531
- Anaerobic metabolism, 49
- Anguilla japonica*, 17, 275
- Anodonta cygnea*, 393
- Antibody production, 159
- Antimicrobial glycoproteins, 141
- Antitumor glycoproteins, 141
- Aphelasterias japonica*, 531
- Aplysia juliana*, 141
- Aplysia kurodai*, 141
- Aplysianins, 141
- Arachidonic acid, 219
- Archicotylus*, 509
- Arginine phosphate, 179
- Aroclor 1254, 95, 107, 119
- Articular capsule, 25
- Ascorbic acid, 159
- Aspartic acid, 549
- Ataxia, 155
- ATPase, 1
- ATP synthesis, 43
- Avermectins, 69
- Baikalobia*, 509
- Batrachotoxin, 443
- Batrachotoxinin, 231
- Bdellocephala angarensis*, 509
- Benzphetamine *N*-demethylase, 487
- Biogenic amine, 11, 291
- Blaberus craniifer*, 11
- Bleomycin, 521
- Blood glucose level, 291
- Bombyx mori*, 55, 63
- Bos taurus*, 269
- BPLT, 185
- Bradykinin-like effect, 189
- BuChE, 127
- Bud formation, 219
- Bursicon, 147
- Butylated hydroxyanisole, 31
- Butyrylcholine, 127
- Butyrylcholinesterase, 127
- Butyrylthiocholine, 127
- C-fibre nociceptors, 459
- C3H/10T1/2, 429
- Cadmium, 175, 203, 213, 263, 493
- Caffeine, 225, 363
- Calcium antagonist drugs, 463
- Calcium dependence, 387
- Calcium homeostasis, 43
- Callichthys callichthys*, 197
- Callosobruchus maculatus*, 89
- Camelus dromedarius*, 323, 487
- CAP<sub>2</sub>, 147
- Carbachol, 451
- Carbamylcholine, 25
- Carboxylesterase, 155
- Carcinus maenas*, 291
- Cardiac cells, 43
- Cardiac glycosides, 1
- Cardiac myocytes, 479
- Caudiverbera caudiverbera*, 513
- Cavia porcellus*, 269, 487
- CD-1 mice, 31
- Cell volume, 1
- Cerastoderma edule*, 493
- CHH, 291
- Chlordimeform, 443
- Cholera toxin, 397
- Cholinesterase, 197, 285
- Chromaffin cells, 513
- Chronotropy, 479
- Ciliary activity, 393
- Citrinin, 429
- CK, 225
- Con A, 185
- Copper, 175
- Corticosterone, 159
- Cu, 275
- Cyanide, 49
- Cyclodiene, 347
- Cyclodienes, 69
- Cypermethrin, 155, 549
- Cyprinus carpio*, 83, 421
- Cysteine, 379
- $\delta$ , 435
- Daphnia magna*, 393
- DDT, 443
- Dehydrogenase, 73
- Deionized water, 409
- Deltamethrin, 443
- Depress erythrocyte, 213

- Detoxification enzymes, 155  
 Diacylglycerol, 337  
 4',6-Diamidino 2-phenylindole, 251  
 Diamine oxidase, 251  
 Dicoumarol, 487  
 Dieldrin, 69  
 Diesel fuel, 543  
 Dietary mixtures, 379  
 Digestive enzyme activity, 415  
*Digitalis lanata*, 1  
 Digoxin, 1  
 Dihydropyrazole RH-3421, 69  
 Diltiazem, 43, 387  
<sup>14</sup>C-Dimethoate, 63  
 Dinitrophenol, 225  
 Dioxins, 525  
 DL- $\alpha$ -difluoromethylornithine, 521  
 DNA damage, 525  
*Dolabella auricularia*, 141  
 Dolabellans, 141  
 Dopa, 509  
 DOPAC, 509  
 Dopamine, 11, 25, 279, 291, 297, 373, 509  
*Dreissena polymorpha*, 409  
*Dugesia gonocephala*, 297  
  
 Ecotoxicals, 393  
 Efferent branchial artery, 535  
 Eicosanoids, 77  
 Electoreception, 165  
 Embryogenesis, 543  
 Endosulfan, 347  
 Endrin, 525  
 Epinephrine, 25, 291  
 Erythrocytes, 207  
 Ethacrynic acid, 311  
 Ethanol, 69  
 7-Ethoxycoumarin O-deethylase, 487  
*Eucidaris tribuloides*, 25  
 Eutrophic, 415  
  
 Fasting, 11  
 Fenvalerate, 155  
 Folidol 600, 197  
 Formamidines, 443  
 Forskolin, 531  
 Free calcium concentration 1  
 Furosemide, 311  
  
 G-protein, 479  
 GABA, 189, 329  
*Gallus gallus*, 459  
*Geocentrophora*, 509  
 Glucose-6-phosphate, 73  
 Glutamate dehydrogenase, 17  
 Glutathione, 31  
 Glutathione reductase, 73  
 Glutathione S-transferase, 31, 155  
 Glycosylated kinin, 189  
*Gryllus*, 471  
 GTH<sub>2</sub>, 83  
  
 Halogenated biphenyls, 113  
 Halosubstituted biphenyls, 119  
 Halosubstitution, 95  
 Hb, 275  
  
 Heart mitochondria, 43  
 Heat exposure, 451  
 Heavy metals, 175  
 HeLa, 429  
*Heliothis*, 471  
*Heliothis virescens*, 443  
*Helix aspersa*, 255, 311  
 Hemolysin, 401  
 Hepatic lipid peroxidation, 525  
 Hepatic microsomes, 95  
 Hepatic monooxygenases, 119  
 Hepatic vasopressin receptors, 247  
 Hepatocytes, 17, 247  
 Hexachlorobiphenyls, 95  
 Hibernation, 329  
 Histamine, 269  
 HVA, 373  
*Hydra vulgaris*, 219  
 Hydrolases, 415  
 5-Hydroxyindolacetic acid, 11  
 Hydroxylation, 113  
 5-Hydroxytryptamine, 11, 77  
 5-Hydroxytryptophan, 11  
 Hypoxia tolerance, 329  
  
*Ictalurus nebulosus*, 165  
 Ileum, 77  
*Incilaria bilineata*, 179  
 Indomethacin, 77  
 Inositol 1,4,5-trisphosphate, 479  
 Insect CNS, 189  
 Insecticide, 69, 347  
 Intracellular calcium, 43  
 Intracellular protein, 17  
 Ionomycin, 543  
 IP<sub>3</sub>, 77  
 Iron content, 275  
 Ischemia-damaged cells, 43  
 Isolation, 11  
  
 Julianins, 141  
  
 $\kappa$ , 435  
  
 Lactate dehydrogenase, 73  
 Lead, 213, 493  
 Leucocyte system, 285  
*Leucophaea*, 471  
 Lindane, 55  
 Lipid, 39  
*Locusta migratoria*, 303  
*Luidia clathrata*, 203  
*Luidia senegalensis*, 203  
*Lymnaea stagnalis*, 363  
 Lymphocyte, 73  
 Lytic reaction, 401  
  
 $\mu$ , 435  
*Mamestra brassicae*, 55, 63  
 Mammary gland, 269  
*Manduca sexta*, 147  
 MCHC, 275  
 MDCK, 429  
 Melarsoprol, 521  
 Membrane potential, 1  
 Mercury, 493, 501

- Meretrix lusoria*, 501  
 Metabolic disposal, 95  
 Metallothionein, 263  
 Methacholine, 25  
 Methanol, 175  
 Methoprene, 239  
 Methyl parathion, 197  
 Methylthiophosphonates, 127  
 MFO, 159  
 Mg, 275  
 MgSO<sub>4</sub>, 409  
 Micronuclei frequency, 207  
 Microsomal monooxygenases, 113  
 Microsomal oxidation, 119  
 Microsomes, 95, 107  
 Mn ions, 387  
 Monophagy, 55  
 Mortality, 49  
 $\alpha$ MSH-positive, 255  
 Mucus, 149  
*Mus musculus*, 269  
 Muscarine, 25, 513  
 Muscarinic receptors, 451  
 Mustard oil, 459  
 Mycotoxins, 429  
*Mytilus*, 471  
  
 N-Acetyl-5-hydroxytryptamine, 11  
 N-Acetyldopamine, 11  
 N-Acetylneuraminic acid, 141  
 Na<sup>+</sup>, K<sup>+</sup>-ATPASE, 1  
 NADPH-cytochrome *c* reductase, 159  
 NaF, 531  
*Negaprion queenslandicus*, 535  
*Neptunea antiqua*, 463  
 Neuroblastoma, 373  
 Neurogenic inflammation, 459  
 Neuropeptide, 255  
 Neurosecretory cells, 147  
 Neurotoxin, 189  
 Neurotransmitter evolution, 329  
 Neutrophilic granulocyte, 73  
 Nicotine, 25, 83  
 Nicotinic acetylcholine receptor, 303  
 Nifedipine, 387  
 NIH/3T3, 429  
 Nitric oxide, 525  
 NMR, 179  
 Noradrenaline, 509, 535  
 Norepinephrine, 25, 291  
  
 Ochratoxin A, 429  
 Octopamine, 11, 25, 279, 291  
 Oleyl-oxyethyl-phosphorylcholine, 219  
 Oligotrophic, 415  
*Oncorhynchus mykiss*, 207, 231  
 Opioid site heterogeneity, 435  
*Oreochromis aureus*, 213  
*Oreochromis mossambicus*, 421  
 ORG 2766, 165  
 Organophosphorus inhibitors, 127  
 Ouabain, 1  
 Oxygen consumption, 421  
  
<sup>31</sup>P metabolism, 179  
*Palaemonetes pugio*, 239  
  
*Paravespula maculifrons*, 189  
 Parotid glands, 451  
 PBB isomer, 107  
 PCBs, 95, 107, 113  
 Peptidergic neurons, 147  
*Periplaneta americana*, 279  
 Peritoneal macrophages, 525  
 pH, 421  
 Phagocytic activity, 73  
 $\beta$ -Phenylethylamine, 25  
 Philanthotoxin-4.3.3, 303  
*Philanthus triangulum*, 303  
 Phorbol-12-myristate-13-acetate, 219  
 Phospholipase C, 337  
 Phospholipids, 39  
 Picrotoxin, 185  
*Pieris brassicae*, 55, 63  
 PIP<sub>2</sub>, 337  
 Piretanide, 311  
 Pituitary, 83  
 PKC, 219  
 Polyortho halosubstitution, 113  
 Polyphagy, 55, 63  
 Porphobilinogen synthase, 493  
 Presynaptic block, 189  
 PRLamide peptides, 471  
*Procambarus clarkii*, 263  
 Proline, 549  
 Propionylcholine, 127  
 Prostration, 155  
 Proteinase inhibitor, 379  
 Proteinases, 89  
*Pseudaletia*, 471  
*Pseudoanodonta complanata*, 39  
 Pyrethroid, 155, 443  
 P<sub>450</sub>, 107, 113, 119  
  
 Radiation, 207  
*Rana temporaria*, 285  
 Rat ileum, 387  
*Rattus norvegicus*, 487  
*Rattus rattus*, 269  
 Retina, 255  
 Reuterin, 521  
*Rimacephalaus arecepta*, 509  
 Ryanodine, 363  
  
*Saccharomyces cerevisiae*, 175  
 SAMDC, 251  
 Saxitoxin, 231  
*Scapharca inaequivalvis*, 49  
 Secretion, 77  
 Serine, 379  
 Serotonin, 279, 291  
 Sex-related differences, 159  
 S.I.T.S., 311  
 Silver, 203  
 SOD, 175  
 Sodium channels, 231  
*Sorocelis nigrofasciata*, 509  
*Spirographis spallanzani*, 401  
*Spodoptera frugiperda*, 155  
*Spodoptera littoralis*, 55, 63  
 Stress, 279  
*Strongylocentrotus intermedius*, 543  
*Strophanthus gratus*, 1



Suckling rats, 397  
 Sucrose-gap, 387  
 Sulfide, 49  
 Superoxide dismutase, 175  
 Suramin, 521  
*Sus scrofa*, 269  
 Synaptoneurosome, 231  
 Synephrine, 279  
  
 TEA, 513  
 Temperature, 155  
 Tentaculectomized snails, 255  
 Tetrabromobiphenyls, 107  
 Tetracaine, 323  
 Tetrachloroethylenes, 285  
 Tetraethylammonium chloride, 185  
 Tetrapeptide, 185  
 Tetradotoxin, 185  
 Thiodan, 347  
*Todarodes sagittatus*, 127  
 Toxicity evaluation, 429  
 Toxicosis, 239  
 Transmitter plasticity, 147  
  
 Transmitter switch, 147  
*Tribolium castaneum*, 379, 549  
*Trypanosoma brucei*, 521  
 Tryptophan, 1  
 Tyramine, 279  
 Tyrosine, 373  
  
 Urea, 17  
*Urechis*, 471  
  
 Vasopressin, 247  
 Verapamil, 185, 387  
 Verrucosin, 219  
 Vesiculakinin 1, 189  
 Vicilin, 89  
*Vigna unguiculata*, 89  
 Vincristine-induced neuropathies, 165  
 Visual ganglia, 127  
 VMA, 373  
  
 Water pollution, 39  
  
 Zinc, 203, 401

# AUTHOR INDEX

Vol. 105C, Nos 1-3

- Abd-Elghafar, S. F. 443  
 Ahmad, H. 31  
 Ahmed, I. A. 363  
 Akiba, Y. 159  
 Akubue, P. 525  
 Al-Jafari, A. A. 323  
 Allen, P. 213  
 Alohan, F. I. 463  
 Alvarez-Bujidos, M. 251  
 Andrade, L. B. da S. 89  
 Andreev, St. 39  
 Arsie, P. 43  
 Avery, W. 203  
 Awasthi, Y. C. 31  
 Aye-Kyaw, 397
- Bacila, M. 197  
 Bagchi, D. 525  
 Bagchi, M. 525  
 Balaña-Fouce, R. 251  
 Barreteau, H. 11  
 Beltramini, M. 175  
 Bennett, M. B. 535  
 Benson, J. A. 303  
 Bertoldi, M. de 175  
 Bonansco, C. 513  
 Borlakoglu, J. T. 95, 107, 113, 119  
 Bourhim, N. 435  
 Branca, D. 43  
 Breton, B. 83  
 Brock, A. 493  
 Brock, V. 493  
 Brousse-Gaury, P. 11  
 Budevskia, B. 39
- Canicatti, C. 401  
 Cantau, Ph. 435  
 Castanas, E. 435  
 Castillo, J. del 25  
 Cattani, O. 49  
 Celestial, D. M. 239  
 Chen, H.-C. 501  
 Chiba, A. 179  
 Chichibu, S. 179  
 Chin, T.-S. 501  
 Church, C. J. 443  
 Cozzani, I. 175  
 Cubria, C. 251  
 Culbertson, C. 379
- Damanhour, Z. A. 487  
 Daniels, S. 225  
 De Petrocellis, L. 219  
 Di Marzo, V. 219  
 Díaz-Mayans, J. 263  
 Doi, E. 429  
 Duncan, C. J. 225
- Eriksson, K. 509  
 Eto, M. 279
- Fanta, E. 197  
 Fogel, W. A. 269  
 Fujinami, H. 451  
 Fujisawa, Y. 471  
 Furukawa, Y. 471
- Gayral, P. 11  
 Genov, N. 39  
 Gentle, M. J. 459  
 Gianfrani, C. 219  
 Giraud, P. 435  
 Gobbo, M. 189  
 Goudey-Perrière, F. 11  
 Grawé, J. 207  
 Grigorjeva, G. M. 127  
 Gromysz-Kalkowska, K. 285  
 Grosclaude, J. M. 11  
 Gsell, L. 303
- Haefner, E. W. 337  
 Hansen, M. B. 77  
 Hassoun, E. 525  
 Hayashi, S. 17  
 Heijmen, P. S. 165  
 Hirakawa, T. 17  
 Hirashima, A. 279  
 Hopkins, P. M. 363  
 Horiguchi, M. 159  
 Howl, J. 247  
 Huddart, H. 387  
 Hue, B. 189, 303  
 Hunter, L. N. 459
- Ikeda, T. 471  
 Ivanov, O. 39  
 Izawa, T. 451
- Jacquot, C. 11  
 Jaffe, B. M. 77  
 Jaros, P. P. 291  
 Johannisson, A. 207
- Kakuta, I. 275  
 Karaseva, E. M. 531  
 Kaufmann, L. 303  
 Kawana, S. 479  
 Kerambrun, P. 415  
 Khan, N. A. 55, 63  
 Khotimchenko, Yu S. 531  
 Kierska, D. 269  
 Kimura, H. 479  
 Kinnunen, A. 269  
 Kitabatake, N. 429  
 Knowles, C. O. 443  
 Komabayashi, K. 451  
 Konitcheva, N. V. 127

- Kramer, K. J. 379  
Kuniyoshi, H. 471
- Lagerspetz, K. Y. H. 393  
Lamash, N. E. 531  
Lares, M. 203  
Lawrence, J. M. 203  
Le Corronc, H. 189  
Lüschen, W. 291  
Lutz, P. L. 329  
Luxoro, M. 513
- Macedo, M. L. R. 89  
Macgregor, S. E. 1  
Magdelaine, S. 255  
Mahmod, S. M. 387  
Mahon, W. D. 203  
Mantel, P. 189  
Manzano, M. 175  
Marchand, C.-R. 255  
Martínez, M. 263  
Maslinski, C. 269  
Matsumoto, S. 471  
McKenney, Jr, C. L. 239  
Medhage, Ö. 207  
Medina, H. S. G. 197  
Mikolajczyk, T. 83  
Minei, R. 219  
Miyamoto, A. 479  
Moraes, R. A. 89  
Morales, M. 25  
Morgan, T. D. 379  
Muneoka, Y. 471  
Murachi, S. 275
- Naqvi, S. M. 347  
Nassar-Gentina, V. 513  
Negro, A. 251  
Neuman, I. S. A. 165  
Nicholson, R. A. 69  
Nilsson, G. E. 329  
Norrgren, L. 207
- Ohshika, H. 479  
Oo, L. L. 397  
Oo, T. 397  
Oppert, B. 379  
Ordóñez, D. 251
- Panula, P. 269  
Pastor, A. 263  
Pelhate, M. 303  
Perrière, C. 11  
Peters, R. C. 165  
Piek, T. 189, 303  
Popov, S. 39  
Punzo, F. 155  
Putzer, V. M. 49
- Ram, J. L. 409  
Ramo, J. del 263  
Reuter, M. 509  
Roberti, M. S. 43  
Roberts, J. F. 521  
Rocchi, R. 189  
Roch, P. 401
- Romandini, P. 175  
Rubin, J. G. 231  
Ruigt, G. S. F. 165
- Saleem, M. A. 549  
Salvato, B. 175  
Santos, D. E. 185  
Saxena, M. 31  
Schultz, N. 207  
Schürmann, F. 303  
Scutari, G. 43  
Senius, K. E. O. 393  
Shakoori, A. R. 549  
Sharma, R. 31  
Siddique, H. 73  
Sierra, C. 25  
Silva, H. C. de 197  
Simonato, B. 43  
Singhal, S. S. 31  
Smith, D. S. 25  
Soderlund, D. M. 231  
Srivastava, S. K. 31  
Stefanov, K. 39  
Stohs, S. J. 525  
Suda, K. 451  
Suzuki, A. 471  
Szubartowska, E. 285
- Takahashi, K. 159  
Takahashi, T. 471  
Takeda, N. 373  
Takeuchi, H. 185  
Tang, M.-Q. 17  
Tayeb, O. S. 487  
Thessalou-Legaki, M. 415  
Tiiska, A. 393  
Timoshkin, O. 509  
Torreblanca, A. 263  
Trivedi, A. B. 429  
Tsuboi, M. 451  
Tublitz, N. J. 147
- Vaishnavi, C. 347  
Van den Thillart, G. E. E. J. M. 421  
Van Dijk, P. L. M. 421  
Vaschenko, M. A. 543  
Venturini, G. 297  
Venudo, A. 43  
Verriopoulos, G. 415  
Vidal, A. 25
- Walker, J. M. 1  
Walker, J. U. 409  
Walker, R. J. 311  
Weil, C. 83  
Wendelaar Bonga, S. E. 421  
Wheatley, M. 247  
Wilkins, J. P. G. 95, 107, 113, 119  
Williams, M. F. 69  
Willig, A. 291  
Win, K. T. 397  
Winlow, W. 363  
Wright, N. J. D. 311
- Xavier-Filho, J. 89

Yamada, S. 17  
Yamazaki, M. 141  
Yunmbam, M. K. 521

Zaman, K. 73  
Zaman, W. 73  
Zhadan, P. M. 543  
Zwaan, A. de 49

C

3